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ABSTRACT

Based on the premise that writing research will be useful to educators only to the extent that it offers them conceptual tools to use in framing and solving their own problems, this paper reviews studies that address educators' perennial concerns about writing instruction. Among the questions addressed in the paper are those concerning (1) the current status of writing instruction, (2) the difficulty of improving writing instruction, (3) what research says about writing instruction, (4) who is studying writing, (5) what researchers have learned, (6) what teachers know about the classroom as an environment for writing, (7) the uses of language in the classroom, (8) how classroom communication is related to learning, (9) the teachers' role in writing instruction and how they influence their students' writing, (10) the alternative roles teachers can play in writing instruction, (11) what lies ahead for writing instruction, (12) how computers are used in educational settings, and (13) how educators participate in using computers in the classroom. The paper concludes with an annotated list of 14 titles on writing instruction, theory and research, curriculum, and special needs of students, and a list of special issues of journals dealing with writing instruction. (HOD)

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TEACHING WRITING:

SOME PERENNIAL QUESTIONS AND SOME POSSIBLE ANSWERS

Susan Florio-Ruane and Saundra Dunn

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Abstract

The authors contend that if research on writing is to be useful to educators, it will be to the extent that it offers them conceptual tools to use in framing and solving their own problems. Thus, this is organized around several questions that are of perennial concern to teachers, administrators, and policy makers. Among the questions asked here are the following: What are the current problems and challenges of writing instruction in schools? Why is writing difficult to teach? What roles do teachers play in teaching writing? What is the nature of the classroom as a place to learn to write? What does the future hold for the teaching of writing? The appendix is an annotated bibliography for further reading.

TEACHING WRITING: SOME PERENNIAL QUESTIONS AND SOME POSSIBLE ANSWERS[1]

Susan Florio-Ruane and Saundra Dunn[2]

For the last four years, we have worked in close collaboration with a group of experienced elementary and secondary school teachers to study the process of writing instruction. Calling ourselves the Written Literacy Forum, we have asked questions, conducted studies, deliberated about our findings, and shared those findings with others (Clark & Florio, 1983). In these efforts, we have learned that often it is in the framing of questions that one gains the most insight into problems of practice.

Over the years, the Written Literacy Forum has encountered a number of recurring questions about writing instruction. Of importance to both the teachers and researchers who make up our group, these questions echo the concerns of teachers across the nation who were surveyed recently by the National Institute of Education. Because of their apparent importance to educators, we have chosen some of these questions to be the organizers of this paper on research on writing. Among the questions asked here are the following: What are the current problems and challenges of writing instruction in schools? Why is writing difficult to teach? What roles do teachers play in teaching writing? What is the nature of the classroom as a place to learn to write?

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[1] This paper will appear as a chapter in V. Koehler (Ed.). *The educator's handbook* published by Longman (forthcoming).

[2] Susan Florio-Ruane is co-coordinator of the Written Literacy Forum and an associate professor of teacher education at Michigan State University. Saundra Dunn is a research intern with the Forum. The authors thank their colleagues at the Institute for Research on Teaching, especially Christopher M. Clark, Frederick Erickson, Taffy Raphael, Barbara Diamond, and Laura Roehler, for conversations that helped clarify ideas presented in this paper. In addition, they thank the past and present members of the Written Literacy Forum for helping them to learn about the teaching of writing. They are, in alphabetical order, James Colando, Jo Ann Dohanich, Janis Elmore, Wayne Hastings, June Martin, Rhoda Maxwell, William Metheny, Marilyn Peterson, Sylvia Stevens, and Daisy Thomas.

What does the future hold for the teaching of writing?

These questions overlap and do not lend themselves to neat and easy answers. But, in asking them, the educator is on the way to interpreting and applying the enormous amount of research being conducted on writing and its instruction. Approaching research in terms of perennial problems of practice can encourage teachers, administrators, and policy makers to examine the educational process in their own communities more closely and critically.

The research reported in this paper is but a fraction of the work in this growing field. It was selected for its potential to offer new ways of thinking about the writing process, the demands of teaching writing, the environment for writing in school, and the teacher's role in shaping that environment. If research on writing can be useful to educators, it will be to the extent that it offers them conceptual tools to use in framing and solving their own problems. Researchers cannot solve the problems of practitioners, but researchers and practitioners can participate as partners in inquiry into effective teaching and literacy education. It is in the spirit of that inquiry and partnership that this paper was written.

What is the Current Status of Writing Instruction?

American education has been much maligned in the research literature and the popular press for its apparent lack of success in teaching students to write. While there is disagreement about the origins of and solutions to these problems, there seems to be consensus among educators and the public that American students leave school writing less well than educators and the public would like, and that not all students have equal opportunities to learn and use writing in school (Hillocks, 1982).

The multiple and varied criticisms of writing instruction reflect the

shifting and diverse definitions of literacy in American society (Chall, 1983). Some scholars argue that schools offer learning tasks so narrow that they ultimately limit the writing skills that students can acquire and practice in the classroom (Emig, 1971; Moffett, 1983). Others assert that teachers typically ask students to engage in hollow writing that lacks subject-matter richness, purpose, stylistic variety, or meaning (Shuy, 1981; Cook-Gumperz & Gumperz, 1981; Florio, 1979). Still other critics contend that, despite lofty democratic goals of universal literacy, not all students share the same exposure to literacy in school (Hendrix, 1981). Others, criticizing the curriculum for language education, assert that what passes for literacy in school is far from ennobling or emancipating (Friere, 1980; Giroux, 1979).

Many of the criticisms lodged against literacy education reflect the complex relationship among educational practice, student characteristics, and societal problems and values. These criticisms tend to be borne out in research. For example, Loban (1976) conducted a pioneering longitudinal study among K-12 Oakland, California, students. In that study Loban found that socioeconomic status was a powerful predictor of growth and success in all forms of the language arts. As time went by, school interventions did less and less to remedy the learning problems of children from poorer households. Thus students assessed to be superior in oral language in kindergarten and first grade were the same ones to excel in reading and writing by grade six (p. 71). In addition, when high school students were grouped by Loban as high, random, and low achievers, all showed some growth in writing from grade 9 to 10, "but only the high and random groups showed another velocity surge from grade 11 to 12. "They are the ones who are anticipating a college education" (p. 32).

In Loban's view, the primary predictor of growth and success in all

forms of the language arts is not quality of instruction or individual student ability, but socioeconomic status. In addition, Loban points out that nothing we have ever found supports the idea of any basic ability difference among ethnic groups. What we do find is that those who use the full resources of language usually come from families with reasonably good socioeconomic status. Social injustices, not genetic differences, account most plausibly for the larger number of our minority subjects with lower socioeconomic backgrounds. (p. 87)

It is inappropriate to place sole responsibility for these problems exclusively at the school or classroom door. Teachers know well that problems of literacy and language learning arise from factors both within and outside the classroom. There are many historical, social, and political factors limiting both the ability to teach writing effectively to all children and the capacity to imagine what such teaching might look like. Still, as professionals with major responsibility for writing instruction, teachers, administrators, and policy makers are confronted with these problems daily and must solve them. Loban challenged educators to respond as follows:

> Pondering the thirteen years of experience with over 200 children in Oakland, the present writer concludes that social conditions we know will continue to exist with gradual modification. Educational preparation for entrance into such a society should include a non-elitist concern with preparation for economic competence: job skills, closer linkage between education and careers, and the option of using informal standard English as part of that non-elitist preparation for the world beyond schooling. Since, obviously, human beings are not merely economic creatures, the schools should also prepare all pupils in a humanistic curriculum which would reveal not only the beauty and power of all language but also the relation between language and society. The study of language itself should be a central feature in all programs, and schools already including such an emphasis have discovered that not only are students fascinated but they are also stimulated "furiously to think." (p.87)

It is difficult to argue with the wisdom of recommendations such as Loban's, but it is also difficult to follow them. After more than a decade of

research on the acquisition and use of language, there continues to be a paucity of broad and rich experiences with written language in American schools. In an extensive survey of high school writing, Applebee (1981) painted a gloomy picture of the writing experience of students both within and beyond the English class. What little writing was done had the teacher/evaluator as exclusive audience, was largely for demonstration of academic mastery, offered little opportunity for revision, and was initiated almost exclusively by the teacher.

In a similar vein, a review of the data collected for the Third National Assessment of Educational Progress (1980) portrays writing performance and attitudes across grades 4, 7, and 10. One general finding is that while improvement may be subtle and gradual, there appears to be some progress in mastery of writing skills "from age to age and grade to grade" (p. 51). However, this finding is tempered by a strong decline over the school career in students' enjoyment of writing, engagement in extended and meaningful school writing tasks, and opportunities for prewriting activities and revision (p. 7). In addition, what meaningful writing there is in middle and high schools seems largely to be available to the most able writers rather than to those who appear especially to need practice. The National Assessment concludes its summary of survey data on writing experiences and attitudes this way:

> When interpreting these results, one should keep in mind the fact that poor writers are caught in a revolving door of cause and effect; they are poor writers, so they seldom write; and, because they seldom write, they are poor writers. Most of them are likely to be in classes requiring little writing. Good writers are more likely to be engaged in positive writing activities because they are more likely to be writing in the first place. (p. 47)

When we read such reports we are struck by three things. First, it appears that teachers' efforts at effective writing instruction seem to yield, not technically competent and motivated young people ready to use literacy to

enrich their lives, but variation in technical skills highly correlated with social class and life chances. Second, we are dismayed at the attitudes of students toward writing after they have been in schools for a while. Apparently, even the more successful young writers seem to view the process as difficult, dull, and devoid of meaning. Finally, this profile of school writing seems strikingly similar to our own school experiences. We are left wondering whether this is because, when learning to teach, we were offered so little in the way of systematic, theory-based alternatives to the kind of writing tasks we experienced as children.

Research and evaluation studies can be especially useful when they prompt teachers to look at their ordinary practices and tacit assumptions about teaching and learning. When such a reflective examination is made of the teaching and learning of writing, the following features emerge:

1. students generally write in response to teacher initiations;
2. teachers tend to select the purpose and format of student writing;
3. teacher response to student writing tends to be limited to product evaluation;
4. product evaluation tends to focus on surface features of language rather than on meaning;
5. little or no technical support is offered students during actual writing time;
6. writing time is limited and considered a private time when peer interaction is discouraged;
7. little time is spent writing first drafts, and revision is rarely undertaken by student writers; and
8. most school writing never leaves the school or classroom to be read by a wider audience.

Why Is It So Hard to Improve Writing Instruction?

Currently educators have access to a large and diverse body of research on writing. Presumably that research can inform educational planning and cur-

riculum design. But as educators review the many, often competing theories of what writing competence is and how it develops, they are likely to feel that they have received a mixed blessing. Researchers differ in their formulation of the problems of teaching and learning writing, and the implications of their work are often not clear or do not flow directly from theoretical models (Beach & Bridwell, 1984). In short, research rarely tells practitioners what to teach or how to teach it. This is one reason why the improvement of writing instruction has been slow and difficult.

A second reason is that, in the past, of the "three R's," writing has been relatively neglected in educational policy, curriculum development, and teacher training (Graves, 1978). Teachers have generally been left in isolation with respect to writing instruction. They tend to plan and teach with neither the limitations nor the guidance of district policy, published materials, or professional training in theories of the writing process (Clark & Florio with Elmore, Martin, Maxwell, & Metheny, 1982). One consequence is that, in many school districts, when writing instruction succeeds, the successes often go unshared and are therefore impossible to incorporate into a working theory of writing instruction that would inform either researchers or practitioners. When this happens, both research and practice suffer.

Often, teachers simply choose to teach writing as they were taught because they lack training and support. Some teachers find themselves bending to pressures on their time and to other external forces that would define written literacy ad hoc. Others manage their difficult situations by retreating to a basal reading series as the sole source of their language arts curriculum (Roehler, 1979). Most are forced to compromise their goals for writing in their classrooms with the realities of an already crowded and often interrupted school day. Horace, the fictitious teacher created by Sizer

(1984) to illustrate the problems faced by the many high school teachers he studied, experienced the problem this way:

> Horace has high standards. Almost above all, he believes in the importance of writing, having his students learn to use the language well. He believes in "coaching"--in having his students write and be criticized, often. Horace has five classes of fewer than thirty students each, a total of 120. (He is lucky; his colleagues in inner cities like New York, San Diego, Detroit, and St. Louis have a school board-union negotiated "load" base of 175 students.) Horace believes that each student should write something for criticism at least twice a week--but he is realistic. As a rule, his students write once a week.
>
> Most of Horace's students are juniors and seniors, young people who should be beyond the sentence and paragraph exercises and who should be working on short essays, written arguments with moderately complex sequencing and, if not grace exactly, at least clarity. A page or two would be minimum--but Horace is realistic. He assigns but one or two paragraphs.
>
> Being a veteran teacher, Horace takes only fifteen to twenty minutes to check over each student's daily homework, to read the week's theme and to write an analysis of it. (The "good" papers take a shorter time, usually, and the work of inept or demoralized students takes much longer. Horace wonders how his inner-city colleagues, who usually have a far greater percentage of demoralized students, manage.) Horace is realistic: even in his accommodating suburban school, fifteen minutes is too much to spend. He compromises, averaging five minutes for each student's work by cutting all but the most essential corners. (pp. 17-18)

Writing is vulnerable in the school learning environment. It is without the kind of curricular support and limitations present in other school subjects. Moreover, like oral language, writing is not simply a content area in isolation, but a medium of communication in the other curricular areas. Thus writing is a complex and powerful aspect of school life that is largely left to the teacher to regulate. However, freed from the tyranny of the textbook as they plan and teach about writing, teachers are often left in the difficult position of having to devise their curriculum privately with insufficient preparation and resources. Researchers have found, for example, that teachers are unlikely to integrate their instruction in writing with their goals in the

other content areas, though not necessarily for lack of knowledge about such integration or its value. Institutional forces including the complexity of the classroom environment, class size, time limitations, and the demands of school-based policies for instruction and evaluation shape the school day and the school curriculum in ways that discourage integration and make extended and meaningful school writing difficult to accomplish (Dunn, Florio-Ruane & Clark, in press).

This situation creates a paradox for writing instruction. On one hand teachers find themselves acting as autonomous curriculum builders in the area of writing far more than is the case when they are guided and limited by textbook series, workbooks, or explicit district mandates. On the other hand, the institutional invisibility of writing instruction often means both that teachers have been insufficiently prepared to teach writing and that those who make normative decisions about the organization of the school and classroom unwittingly impede the kind of teaching and learning events needed for genuine written expression to occur (Florio & Clark, 1982; Martin, 1984). Thus writing instruction is a strategic site for research on teaching, learning, and policy since it demands that the teacher answer some essential questions--"What should I teach?" and "How should I teach it?"--in the context of what is known about the processes of both writing and schooling in American society.

What Does Research Say About Writing Instruction?

In recent years research about writing and its instruction has proliferated for at least three reasons. First due to increased federal funding for research on classroom communication in general (Cazden, in press) and written literacy in particular, the last decade saw a large number of studies of writing by scholars in many disciplines (Whiteman, 1981; Frederiksen & Dominic, 1981). Second, there has been great public pressure to improve the quality of

education in all basic skills areas in the recent past, and writing has benefited from this attention (see, for example, *A Nation at Risk*, National Commission on Excellence in Education, 1983). Third, the current popularity and accessibility of microcomputers at school, at home, and at work has increased interest in the composing process and the ways that new technology may influence how it is learned and undertaken (Lawlor, 1982; Mehan & Souviney, 1984).

Increased research presents educators with both the opportunity and the challenge to review studies of writing and determine ways in which research might lead to more effective instruction. However, while research on writing instruction may be a relatively new enterprise, educators are likely to find that the questions these studies address are perennial ones. Thus, as they attempt to review and apply research, educators are not seeking facile answers to trendy new questions. They seek, instead, enriched ways to think about and solve problems of teaching that have been around for generations.

Who Studies Writing?

Written literacy has been studied by scholars from many disciplines, among them psychology, education, anthropology, linguistics, English, and rhetoric. In addition, a number of interdisciplinary research teams, some of which include experienced teachers as research collaborators, have investigated the writing process (Mosenthal, Tamor, & Walmsley, 1983).

Researchers from each discipline bring to the investigation of writing different guiding assumptions and ways of viewing the writing process. Frederiksen and Dominic (1981) have proposed a taxonomy of four perspectives on writing that "emphasize different aspects of writing processes and influences on them; yet all are concerned centrally with understanding writing processes" (p. 2). These four perspectives are writing as (1) a cognitive activ-

ity, (2) a particular form of language and language use, (3) a communicative process, and (4) a contextualized, purposeful activity.

Those who focus on writing as a cognitive activity are concerned with the nature and development of the writer's knowledge, strategies, and skills and with the general characteristics of the writer's thinking. Cognitive psychologists studying writing attempt to identify the mental processes involved in writing and explain how these processes work and interact (Gregg & Steinberg, 1980; Frase, 1982).

Other researchers choose to focus on particular rhetorical aspects of a writer's knowledge such as the different language forms an author can use depending on the purpose, audience, and context of the writing. Many of these researchers are concerned not only with the writer's thinking, but with the writing situation and with the characteristics of the texts produced by persons of various levels of literary competence (Britton, 1982; Lloyd-Jones, 1981; Moffett, 1983).

Still another group of researchers focuses on writing as a social process Like the scholars mentioned above, these researchers are concerned with the writing process and with the author's relation to his/her audience, but they pay special attention to the social norms that govern the forms writing takes in a particular cultural setting (e.g., a community, school, or classroom) and and the social purposes served by various written forms (Smith, 1983; Szwed, 1981; Heath, 1983).

What Have Researchers Learned?

With so many people working on so many different studies of writing and instruction, it is not easy to summarize or synthesize what they have learned thus far, but several good reviews of research on writing and its implications for practice have been written in the past few years. These reviews cut a-

cross the diverse disciplinary approaches to writing research and attempt to distill from them what appear to be the most relevant insights for educators.

Glatthorn (1981), for example, summarizes research on writing for an audience of school administrators, while Kean (1983) does the same for teachers and teacher educators. These two reviews are notable for several reasons. First, they are extremely consistent in what they select to be the most relevant insights from recent research. Second, as we shall elaborate shortly, the educational implications of the research they review seem inconsistent with the ways that most people have been taught to write in school.

Using the work of Glatthorn, Kean, and others, the following list of propositions is presented as food for thought for educators interested in rethinking their approach to writing and its instruction in their classrooms, schools, or districts. Though relatively short and general, this list is one about which we think there would be agreement even among the diverse, interdisciplinary collection of researchers currently studying writing and its teaching. In addition, the insights presented here do not readily take the form of prescriptions for practice. Instead, they are statements of what researchers have learned that may stimulate educators to think in new ways about writing instruction in their own particular situations. (An annototed bibliography is appended for those who want to read their works in further detail.)

Proposition One: There is Lack of Consensus About School Writing, Its Purposes, and Its Curriculum

A painfully obvious implication of current research on writing instruction is that there exist different definitions of writing and different sets of strategies for teaching. While there is general cultural agreement that writing should be taught, when Mosenthal (1983) attempted to frame a taxonomy

of the purposes underlying and shaping instruction, he was able to identify at least five. Some of these purposes are recognizable as the sole motivation for writing instruction in some school districts. Other purposes are simultaneously achieved by a variety of integrated writing activities. Several purposes, however, potentially contradict one another and are the source of controversy among language educators and researchers (Hillocks, 1982).

The purposes for teaching writing identified by Mosenthal were (1) *academic*, writing as a means of conserving and passing on cultural norms; (2) *utilitarian*, writing to pass on traditions and cultural knowledge thought to enable survival in the adult world; (3) *romantic*, writing to develop one's sense of autonomy and worth; (4) *cognitive-developmental*, writing to promote intellectual growth and lifelong learning; and (5) *emancipatory*, literacy learning for equality and social justice (Mosenthal, 1983).

In an ethnohistory of literacy education in America, Heath (1981) notes that purposes such as those mentioned above were not always the ones for which writing was taught. American educational history has been marked by shifting definitions of literacy and the values associated with it. However, the purposes identified by Mosenthal seem to capture the contemporary views. They are so taken for granted that their validity and utility are rarely questioned. Yet as powerful organizers of curricula, instruction, and evaluation practices, they merit continual review and examination by educators and other community members.

When researchers look at curriculum and instruction they find that different strategies for teaching and evaluating writing tend to reflect the varied, often competing purposes for which writing is taught in school (Katz, 1984). Urging greater awareness and specificity about definitions and values for writing, Kean (1983) cites Moffett, who offered five definitions of wri-

ting that cover most senses in which the word is used: writing as (1) handwriting--the physical act of drawing letters, making graphic symbols; (2) transcribing and copying--taking dictation, recording one's own words or the words of others; (3) paraphrasing--summarizing the words of others, reporting what others have said or done; (4) crafting--constructing good sentences, paragraphs, and overall organization; and (5) authoring--revising inner speech into outer discourse for a specific purpose and a specific audience (p. 8).

One of the major contributions of research on writing has been descriptive. By reviewing the many forms and functions of writing observed in classrooms or conceived by researchers for study, one begins to appreciate the many purposes writing is thought to serve, the many values connected with literacy by society, and the many facets of the social and cognitive process one calls writing. Thus when a student says that s/he did writing in school today, s/he may be referring to any number of activities differing in their nature, purpose, and social and intellectual complexity.

Proposition Two: Writing Is a Complex Process

Most mature writers would agree that writing is ultimately all of the operations mentioned above--done simultaneously. Researchers and practitioners alike, however, disagree about how to attain this mature writing performance. Holding different views both of the writing process and how it is learned, some researchers argue that people are what Vygotsky called "natural symbolists" (1962). Using the metaphor of the acquisition of oral language, these researchers tend to prefer a model of writing development in which children, armed with purpose and occupying a supportive environment, engage in writing as a holistic process of communication. Gradually, with help, encouragement, and models from more experienced writers, their writing takes on the

qualities of mature performance in large measure because they have inferred the norms for writing by guided practice, purposeful tasks, and helpful responses from their teachers (Birnbaum & Emig, 1983; Clay, 1975; Martin, 1981).

Also taking research on the acquisition of oral language as their point of departure, other researchers hold a different view of the writing process. Strongly influenced by the operations of the computer as a model or metaphor for human thinking, these researchers consider the writing process to be a many-faceted, complex task of information processing. They assert that the process offers far too many new bits of information for the beginner to hold in consciousness at one time and recommend that the process can be divided into constituent parts for teaching and learning. These researchers are often cited in writing curricula that place a high value on practice of isolated parts of the writing process. Among the many kinds of things student writers practice until they have been so routinized as not to demand the writer's conscious attention are spelling, punctuation, and the structuring of sentences. Thus freed from some of the cognitive load of writing, the beginner can work on more complex aspects of writing that involve meaning and rhetorical purpose (Lawlor, 1983; Daiute, 1984; Bereiter & Scardamalia, 1981).

What is remarkable about these two camps of research on writing is that, despite their different views of how it arises and develops, they share consensus on perhaps the essential feature of writing--that it is a process. Although most people learned from the dreaded red marks all over their hastily-written tests and themes that writing was the product of their labors rather than the process, the notion that instruction ought to focus on the process rather than the product of writing is most significant in current research (Flower, 1981). While this view may contrast sharply with many people's school experiences, it flows from more than a decade of research into both the

mental processes involved in composing and the social and instructional factors that seem to enhance its development. However, attention to process does not preclude attention to product. Instead, awareness of the writing process transforms people's thinking about that product in important ways.

Proposition Three: The Writing Process Has Phases That Can Guide Instruction

Some of the oldest myths and traditions about writing instruction are challenged by current research. First, research on the composing processes of both beginners and experts shows that writing is undertaken in overlapping and recursive stages (Flower, 1981). Some researchers state these stages broadly as: prewriting, writing, and postwriting. Others parse them further into exploration, planning, drafting, revising, and sharing or publication. Regardless of how they are labeled, the important features of the phases are as follows: First, authors appear to engage in an extended period prior to writing in which they generate provisional plans for the text, identify the purpose of their writing, consider the voice they will use, and identify the audience for whom they will write. (One can see in an instant how this fundamental stage of the writing process is truncated when teachers initiate writing tasks, select the topic and format of the writing, leave unexamined the writing's purpose, and serve as the student's sole audience.)

The second phase of the writing process is the most familiar one. It occurs when pencil actually touches paper for extended drafting. Here again, however, tacit assumptions have been challenged by the research. First, writers do not appear relentlessly to follow predetermined formats or plans. In fact, the most mature writers engage in extensive revision of their plans as they write. Thinking and writing appear to shape each other. In addition, this stage requires the writing of a first, rough draft. Attention to spell-

ing, punctuation, and other mechanics related to surface form (and important later when the document is ready for publication) can be suspended in order to free the author to express thoughts on paper without distraction.

Three things become apparent to the reader of research at this point (Graves, 1983; Shaughnessy, 1977). First, when writing is construed as a process, teaching it may take more time than is often allocated for writing or language arts in school. Second, the first draft, typically the only one required of students, is in fact just the beginning of the writing process. And third, the teacher, often the critic or even the editor of first drafts in the past, can be viewed as playing a crucial support role during the early phases of the writing process. In particular, the acknowledgment that the teacher's role may turn out to be neither that of arbiter of a text's form nor that of the editor and evaluator of the first draft implies that the teacher must serve as a coach, an attentive witness to the first-draft who can intervene strategically to help authors in their efforts to get their thoughts on paper, to envision their absent audiences, and to clarify the purposes of their writing (Freedman, in press).

The third phase of the writing process involves much of what teachers used to teach first. It concerns editing, revising, and otherwise readying the text for sharing with a real audience. Here it is not uncommon for points of grammar and spelling to be taught, but research has found that it is far more effective to do such teaching in the context of the student-author's actual text and purposes (Kean, 1983). Even when one wants to drill a particular skill, tying it to the needs of the student seems most effective. Direct teaching of grammar and diagramming sentences have not been found to be useful in helping students write extended and cohesive prose. Though some have found that practice combining sentences into longer, more complex ones

can be helpful here (McCutchen & Perfetti, 1983), it appears that the ability to create cohesion between parts of sentences, sentences themselves, or even paragraphs is a competence acquired in general language use rather than in isolated drill and practice (Halliday & Hasan, 1976).

Proposition Four: The Classroom Is a Complex Environment for Writing in Which the Teacher Plays Several Important Roles

Re-thinking the writing process in light of the first three propositions, educators reading this paper might be alarmed at the work that would appear to be involved in coaching each student author to a finished product--particularly when that research also suggests that students who write frequently with coaching and feedback tend to learn to write more effectively. But, in fact, the research news in this area is potentially very good. Traditional evaluation, where the teacher served as editor, might usefully be replaced by having the students edit their own and each other's work. While negative feedback from the teacher does not appear to be helpful, critical feedback from interested readers does (Kean, 1983). Thus writing conferences between teacher and students can replace the armloads of papers that teachers used to have to take home to "correct." In addition, peer conferencing allows this responsibility to be shared, and students learn by reading and responding to others' work. Such responses and even their extension by the publication of student work in the classroom, school, community, and beyond help students see that their writing is of genuine importance and offer practice in writing for diverse audiences (Florio, 1979).

Findings like these highlight the teacher's roles of respondent to the student writer and designer of the learning environment in which writing will occur. Broadening one's conception of the teacher's role in writing instruction and of the school and classroom as places in which to write has impli-

cations for teacher education, classroom and school organization, and the allocation of school and community resources.

The current research focus on process and technical support rather than on drill of isolated skills, for example, strongly suggests that students may learn best from teachers who are themselves writers--familiar with all phases of the writing process and role models of its utility and importance. In addition, students appear to learn from reading the writing of others--both the works of their peers and those of published authors.

Writing is evidently not the quiet, solitary, and discrete act many once thought it was. Peer writing and revision are useful; writing one document well takes time--there must be much on-site teacher help and support. When focusing on the process of writing rather than on the product, evaluation needs to be formative rather than summative. Techniques like holistic scoring and primary trait scoring can be modified by teachers and district administrators to evaluate their process goals (see Hirsch & Harrington, 1981, for definitions and critiques of these methods). Sensitive record-keeping must be undertaken along the way to provide data for teachers about how to help and support their students' writing rather than how to rank them against some external standard. More will be said about these issues in the following sections of this paper on the nature of the classroom as an environment for writing and the role of the teacher in helping students learn to write.

What Do We Know About the Classroom as an Environment for Writing?

In his study of the relation of schooling to thinking, Parker (1983) points out that regardless of the perspective researchers take on the development of the writing process, there appears to be at least tacit agreement that writing--like speaking--is a process with social, historical, and cogni-

tive implications. As children learn to communicate, they learn "to mean" (Halliday, 1976). In so doing, they express and amplify their thinking (Bruner, 1975). This important psychological process takes place not only in the context of social life--that is, in communication with others--but it is also constrained by the communication systems that the culture has developed and passed on over time. Thus, in learning to speak or write, there are powerful interactions between inner, psychological processes and social and historical forces (Vygotsky, 1978).

Classrooms are the places where the formal business of teaching and learning is accomplished in American society. While many children are educated for literacy informally in the home (Heath, 1983), schools are charged with the explicit responsibility to teach children to read and write. Even a brief visit to an American classroom impresses the observer with the abundance of speaking, listening, reading, and writing being engaged in as part of the daily round of school activities. Because of the sheer volume of language learned and used in school, and in light of the relationship between language as a cultural system and the developing thought of the child, Parker (1983) asserts that researchers and educators must study language learning and use in schools and classrooms. He asks,

> From this viewpoint, what might we hypothesize about important cultural institutions like schools? Schools are "language-saturated" institutions. What are their language policies and practices, what role (or roles) do they play in the growth of mind? (p. 143).

For the past 10 years, researchers have been conducting studies of communication in the classroom prompted by just these sorts of questions. Much of this research has been reviewed in recent articles by Cazden (in press) and Green (1983). Among the many things researchers have learned about oral and written language in classrooms, three insights are particularly important to educators. First, classroom language serves a variety of important social and

academic functions. Second, language has a number of manifestations across classrooms and across time and activities in even one classroom. Third, classroom life demands of the teacher and the student a wide range of social and linguistic competences in order for them appropriately to match language form with social situation and purpose and thus succeed in school.

What Are the Uses of Language in Classrooms?

Before research on classroom communication was initiated, it was well-known that the language arts--speaking, listening, reading, and writing--were part of the school's explicit curriculum. Since clear and thoughtful communication seems to mark the educated person in American society, and because language learning is fundamental to cultural transmission, it was taken for granted that the school's place was to inculcate both the grammar of English and the understanding of how that grammar worked. This can be thought of as one manifestation of classroom language--*language as a part of the curriculum.*

However, language provides not only content for instruction, but the medium of instruction in classrooms and the foundation of all social and academic life that occurs there. Viewed in this way, language is part of what Jackson (1968) called the school's "hidden curriculum." Researchers have found, for example, that speech and writing are used by teachers and students not only for skill practice, but for the creation and maintenance of social relations in the classroom. As in the family, the peer group, or the workplace, people talk, listen, read, and write together in classrooms not exclusively as practice toward some other end, but as a practical part of human daily life (Erickson, 1982). Thus a second manifestation of language in the classroom is *a tool to create and maintain social life.*

Classrooms are special social places. Since they exist within formal

institutions accountable for the teaching of the young, it is not surprising to find that evaluation is an important activity in classrooms. Teachers monitor language used in the classroom to assess how well they are teaching and to infer how and what their students are learning. Herein lies a third special manifestation of language in classrooms--*language as a means to assess the learning of students and the effectiveness of teaching*.

How is Classroom Communication Related to Learning?

Recent research on classroom language has addressed the relationship between the social use of language and the extent to which children learn--or are assessed as having learned--in school. Particularly among children who, for reasons of social class, first language, or culture are less well-serverd by our schools, difficulties in teaching and learning appear to be language-related. These difficulties arise at least in part from conflicting understandings and expectations among the learners, their families, and their teachers about all three of the functions of language in the classroom (Cazden, John, & Hymes, 1972).

Educators know that communication problems can be apparent in all four of the language arts. Research on the writing needs of culturally and linguistically different children, though in its early stages, addresses the relationships among culture, communication, and classroom experience (Cronnell, 1981). Consistent with the findings of research on their oral communication in the classroom, researchers are finding that many of the writing problems experienced by bilingual or culturally different students stem only in part from interference of the structures of their first language with those of the written forms of English. Equally or more important for educators is the insight that teachers often expect less of these students in virtue of their

different language experiences or that because of cultural differences and teacher expectations, students get less than optimal classroom experiences (Au & Mason, 1981; McDermott, 1977).

These findings are paralleled in studies of children who are hearing-impaired. The longstanding assumption that to be without hearing was to be without language has been largely disabused. Yet in many educational set tings, hearing-impaired children are isolated from written communication both literally and figuratively when those with whom they might communicate in writing assume that loss of one expressive channel limits communication in another. Here, again, important new research on the writing process is beginning to show students as able and eager to learn to write in environments where they are treated as sociolinguistically competent persons with important thoughts to communicate (Whiteman, 1981).

In summary, research has systematically explored and described what experienced teachers have no doubt known for a long time, that when teachers and students engage in daily rounds of classroom communication--be it speaking, listening, reading or writing--they are doing at least three things. First, they are working on aspects of the school curriculum. Second, they are engaged in social exchanges with one another. Third, they are showing each other what they know for purposes of assessment. The simultaneous realization of these three functions of language in the classroom makes that social setting a complicated and unique one in the lives of most children. How a child manages the demands of classroom communication and how a teacher interacts with that child can influence not only the expectations held and opportunities provided for that child, but ultimately how and what the child learns about literacy and him/herself in the world.

What Is the Teacher's Role in Writing Instruction

While many social forces external to the classroom influence the communication that occurs there, the teacher has unique authority to influence thought and language in the classroom. It is in this sense that the teacher's role in writing instruction is a central one closely related to issues of the learning environment. These two aspects of literacy education are therefore of considerable interest to educators and researchers alike.

Within the social system of the classroom, teachers and students communicate with each other by means of oral, written, and non-verbal behaviors (Bremme & Erickson, 1977). When writing instruction is viewed as part of this communication system, one finds that the interactions of teacher and student greatly affects what the student writes and how s/he writes it.

In our work with high school writers, for example, we found that adolescents stressed the importance of their personal relationships with their teacher in both the meaningfulness of the writing they did in school and in their willingness to do it. Speaking of their creative writing teacher, for example, students told us, "his interests coincide more with (those of) students than other teachers, so we can relate with him better," and "he treats each poem and writing as a piece of art and personal feelings, not as (something to) grade" (Dunn, 1983).

Now that researchers are examining not only the process of writing, but the process of writing instruction, they are finding that the crucial questions may not be those concerned with the teacher's response to students' writing, but those concerned with the teacher's response to the student writer. Sondra Perl (1983), a teacher and researcher noted for her extensive descriptive studies of writing in classrooms, explains that when writing was taught, measured, and evaluated exclusively on the basis of a finished product, little

attention was given to questions such as "What can teachers do to facilitate the writing process in their classroom?" The new focus on the understanding of the process of writing highlights the necessity of teachers talking and listening to students about writing and its purposes. To do this, Perl and her colleagues argue, teachers must be writers themselves. If one thinks of writing as a craft, rather than a product, it is easy to see why it is so important that the teacher be a practicing writer, not just an observer and evaluator.

How Do Teachers Influence the Writing of Their Students?

When we studied writing in elementary and middle school classrooms (Clark & Florio, et al., 1982), we found that it served four broad functions: (1) to participate in community, (2) to know oneself and others, (3) to occupy free time, and (4) to demonstrate academic competence (see Table 1). Each of these functions of writing took a different form and was marked by particular kinds of teacher-student interactions.

In looking at these categories of writing with the teachers whose classrooms we studied, we found that the teachers were largely unaware of the range of opportunities for writing seized by their students in the course of a day. In addition, viewing their classrooms from the additional vantage point provided by descriptive research, the teachers were dismayed to discover that so much of the day's official writing, had the teacher as initiator, composer, and audience. In contrast, much of the student writing that went unnoticed by the teachers offered the students nearly complete control of the rights and duties of authorship.

Pondering these findings with the teachers, several questions linking the classroom environment to the teacher's role in school writing emerged:

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Table 1

The Functions of Writing in an Elementary Classroom

Function Type	Sample Activity	DISTINCTIVE FEATURES						
		INITIATOR	COMPOSER	WRITER/ SPEAKER	AUDIENCE	FORMAT	FATE	EVALUATION
TYPE I: WRITING TO PARTICIPATE IN COMMUNITY	classroom rule-setting	teacher	teacher & students	teacher	student	by teacher & students: drafted on chalkboard; printed in colored marker on large white paper	posted; referred to when rules are broken	no
TYPE II: WRITING TO KNOW ONESELF AND OTHERS	diaries	teacher	student	student	student	by teacher: written or printed on lined paper in student-made booklets	locked in teacher's file cabinet or kept in student desk; occasionally shared with teacher, other students, or family	no
TYPE III: WRITING TO OCCUPY FREE TIME	letters and cards	student	student	student	other (parents, friends, family)	by student: printed or drawn on lined or construction paper	kept; may be given as gift to parents or friend	no
TYPE IV: WRITING TO DEMONSTRATE ACADEMIC COMPETENCE	science lab booklets	teacher	publisher	publisher & student	teacher	by publisher: printed in commercial booklet	checked by teacher; filed for later use by student; pages sent home to parents by teacher	yes

From Florio & Clark, 1982

Who initiates writing in the classroom? Who is the primary composer? Who is the intended audience? What is the format of the writing? Is the writing evaluated? If so, how? And, finally, what relationship do these contextual factors have to student growth in writing?

When classroom writing is studied in terms of such questions, it becomes apparent that the scope and range of student writing is inevitably shaped by the teacher-student relationship. Often, the form of teacher-student interaction during formal writing instruction resembles that identified by sociologist and teacher educator Hugh Mehan (1979) in his study of the oral language of instruction in the classroom. Mehan found that classroom talk during lessons could be described as consisting of three turns--two for the teacher and one for the student. In Mehan's description, the turns took the form of (1) teacher elicitation of information from the students, (2) student response, and (3) teacher evaluation of the response for both academic correctness and social appropriateness.

In looking at writing to demonstrate academic competence, the form of writing most prevalent in the classrooms we studied and typically the only form of writing used as the basis of formal assessments of learning, we found a communication pattern similar to that described by Mehan. In general, the teacher took responsibility for initiating the writing task, determining such things as its timing, audience, purpose, and format. Then the students wrote in response to the teacher's initiation. Finally, the teacher read and evaluated the students' writing--usually serving as its sole audience (Florio & Clark, 1982). Exciting exceptions to this pattern occurred during unexpected occasions for writing, when teachers found themselves deviating from routine activities to capitalize on unexpected opportunities for their students to write for outside audiences. On these occasions, motivated by real-life pur-

poses for writing and typically addressing audiences beyond the classroom, students tended to engage in extended writing activities in which they exercised more of the author's role, received coaching and support from the teacher, and produced multiple drafts en route to their final one.

In sharing our insights with the teachers in our study, we found that the routine system of assignment of rights and duties of authorship tended to operate outside their conscious awareness. Armed with plans and intentions to motivate students to write, teachers were unaware of the high degree of control they exercised over writing activities or of the ways in which that control served to limit the student's experience of the writing process. It was only when those plans were abandoned by the teacher that students experienced an opening up of the writing process enabling them some control over purposes, formats, audiences, and evaluation of the writing's effectiveness. This insight suggests that the social organization of the classroom, and the rights and duties of students and teachers, can have powerful effects on the kinds and amounts of experiences students have of written literacy.

The writing that can be observed in classrooms is often not only rhetorically and syntactically limited, but is also expressive of the asymmetry of power that exists between the student and teacher. Such asymmetry plays itself out in expressive rights and obligations that limit what facets of the author's role the student has an opportunity to practice. If goals for literacy education extend beyond the classroom walls to the world of adult society and work, these limitations can have profound implications. In many writing activities, the teacher determines the subject matter and form of the writing, the student writes as an academic performance, and the teacher evaluates the written document. Yet this pattern is not typical of most writing that goes on in the world outside the classroom. Rarely in adult writing does

the same person play the roles of initiator, audience, and evaluator. Rarely in adult life is the purpose of writing the earning of a grade. Yet this is the type of writing encountered by many students in school.

The consequences of this situation were painfully experienced by the young adults who were taught and studied by Shaughnessy (1977) in an open enrollment program at the City University of New York. Though these students had many other educational and economic disadvantages with which to contend, Shaughnessy's description of them suggests that one of their disadvantages stemmed directly from their prior schooling. That disadvantage was the absence of opportunities in school to experience the role of author--that is, to take the power and responsibility associated with identifying a purpose and an audience for writing, drafting a document, revising it, and seeing it through to sharing with others (Shaughnessy, 1977).

Shaughnessy contends that, deprived of this role, the students did not think of themselves as having ideas worth writing down. Moreover, their deprivation had implications for their willingness to engage in extended writing and revision. They simply did not know that "good" writers wrote, evaluated, and revised their work many times before it was ultimately published. Writing and revising so little, these students had been deprived of the chance to practice the complex craft of writing. Thus, it is not surprising that they experienced many difficulties manipulating both the syntactic and semantic complexities of formal written English. In this regard, Shaughnessy offers the following example:

> Students should be helped to understand, first of all, the need for punctuation, both as a score for intonation, pauses, and other vocal nuances and as a system of marks that help a reader predict grammatical structure. This understanding comes about when the writer is able to view his own work from the reader's perspective. It should not be surprising, however, that BW (basic writing) students, who have generally read very little and who have written only for teachers, have difficulty believing in a real audience. Various

> strategies can encourage this shift of perspective: exchange reading of student papers, an exposure to unpunctuated passages that students are required to read aloud, audiovisual demonstrations of the way a reader gets derailed by faulty punctuation (p. 39).

Thus Shaughnessy connects the social context of learning to write with learning how to communicate one's ideas to an absent audience and, ultimately, with the important technical issue of appropriate punctuation.

What Alternative Roles Can Teachers Play in Writing Instruction?

What are the alternatives to this teacher elicitation, student response, teacher evaluation structure of classroom interactions? And what are the implications for the teacher's roles? Assuming, with researcher Heath (1982), that "there are more literacy events which call for appropriate knowledge of forms and uses of speech events than there are actual occasions for extended reading or writing" (p. 94), many educational theorists are urging the broadening of occasions for writing in school. By redefining the roles of student and teacher in the writing class and by changing the audience and the purpose of school writing, it is possible to open up the range of responses that teachers can make to support student writing, the range of purposes to which writing can be put, and the range of topics and forms that can be used and practiced by students. In short, the manner in which one chooses to perform the roles of teacher and student has tremendous influence on the writing that gets done.

In thinking about teacher-student relationships in terms of the social roles enacted by each participant and the ways that they are negotiated in the classroom, we have found the sociological concepts of "role enactment" and "role distance" helpful (Goffman, 1961). Goffman defines role enactment as "the actual conduct of an individual while on duty in his position" (p. 85). He argues that, in role enactment, one has considerable leeway in how one

manages the rights and duties attendant to the position and that enactment is negotiated with others in the context of face-to-face interaction. How one enacts a role has implications for the reciprocal roles of others in the same social situation.

Enactment of a writing teacher's role is negotiated with the students and has implications for the rights and duties that the students will experience in their roles as writers. A teacher may at times choose to "embrace" (Goffman, 1961) the teacher role, taking the power to initiate student writing, determine its content and format, and be its sole audience and evaluator. Such embracement, Goffman notes, is typical of baseball managers during games and traffic police at rush hour. When the teacher assumes such power and responsibility for student writing, it is clear that s/he can greatly limit the student's role to mere task completion and academic performance for a grade.

In contrast, teachers often distance themselves from the full expression of the putative teacher role. In what Goffman calls "role distance," the teacher separates self somewhat from role, thereby opening up new social options to others in the scene. In doing this, the teacher "apparently withdraws by *actively* manipulating the situation. . . . The individual is actually denying not the role but the virtual self that is implied in the role for all accepting performers" (pp. 107-108).

By active manipulation of the instructional situation and distancing themselves from the role traditionally expected of the writing teacher, teachers are able to support the writing process among students in a variety of ways. Researchers have examined and written about several of the ways that teachers do this.

The research team of Staton, Shuy, and Kreeft (1982), working out of the Center for Applied Linguistics, has reported extensively on the writing done

in the classroom of Leslie Reed, a teacher who has negotiated a special kind of writing with her students. For 17 years Reed has kept dialogue journals with her students. Dialogue journal keeping is an interactive, functional writing that occurs between two or more people (here, a teacher and each of her students) on a regular basis (here, daily) about topics of interest to the writers. Reed uses dialogue journals both to improve her students' competence with written language and to support their academic and social emotional development.

Much of our own understanding of high school writing has come from the exchanging of dialogue journals with six adolescent writers. Interested in learning more about how they viewed writing, Saundra Dunn corresponded with each student for one semester. She found that unique relationships developed with each of the six student informants.

As did the students in Reed's class, the students with whom Dunn exchanged journals approached the purpose and ownership of the journal in very different ways. In several cases, the correspondents had difficulty abandoning the form of adult as questioner and student as respondent. In other journals, Dunn and the student gradually negotiated greater symmetry in their relationships. These journals are marked by the gradual attainment of reciprocity in initiation of new topics and in disclosure of personal information on the parts of both the adult and the student writers (Dunn & Florio-Ruane, 1984). Although not research on writing instruction per se, the studies mentioned above shed light on issues central to curriculum and instruction in writing. Moffett (1983), a language arts educator, has argued that a "trinity of discourse" underlies all writing: In this idealized triad the *author* writes about a *topic* for an *audience* removed in space and time. In many classrooms this triad is distorted such that the student is the author and the teacher is

both the determiner of the topic and the audience. This distorted triad limits the range of potential relationships among the author and audience, the author and the subject matter, and the audience and subject matter.

Another way to think of this triad is in terms of what might be called "writing for the real world." Teachers can create this triad in their classrooms by refocusing school writing toward purposes and audiences identified by the student or otherwise meaningful in his/her life. This transformation is more than mere window dressing in the name of relevance. It actually can transform social relations that surround writing. And, since writing is an expressive tool, it, too, is thus transformed.

To accomplish such a transformation may call upon teachers intentionally to distance themselves from several facets of the roles typically assumed by writing teachers (for example, determiner of subject matter, sole audience, and sole evaluator of the author's written product). This renegotiation also requires that the teacher shift roles in a variety of ways during writing instruction.

We have learned from our dialogue journal exchanges with students, our discussions with teachers, and our extended fieldwork in elementary, middle, and high school classrooms that the teaching of writing is approached quite differently by each teacher and also by a single teacher at different phases of writing instruction. The primary facets of the teacher's role that we observed and that have been written about by other researchers are those of motivator, resource person, strategist, model, and coach (Shaw, Pettigrew, & Van Nostrand, 1983). At various times in the student's conception, writing, and revision of a document the teacher may alternately encourage or motivate the writing, offer technical assistance, help the writer to clarify meaning and intentions, and aid in the publication of a student's work. How and when

to intervene in the work of the student author becomes the focus of this type of teaching.

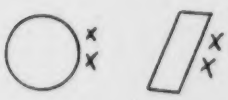
The research of Graves (1983) and his associates on conferencing speaks as well to the enterprise of changing the teacher's role and opening up the instructional process. For Graves, the writing conference is one excellent way to engage the student writer. In the conference, typically a face-to-face conversation between student and teacher about the student's work in progress, the norms for classroom speaking and listening are significantly altered. Students maintain ownership of their work holding it in their own hands and speaking about its purposes and problems. Sitting beside the student rather than across from him/her (see Figure 1), the teacher enters the conference to support and extend student thinking and writing.

In this kind of interaction, the written product is important to the teacher and student, but in new and different ways. It is the basis for a conversation between teacher and student in which both will learn. For the teacher, the document and its discussion can be diagnostic. By listening to the student and reading the work in progress, the teacher can come to know the young author's intentions, resources, growth, and needs. For the student, talking with a teacher about the work and responding to thoughtful questions is a way to expand and clarify thinking about audience and purpose as well as a moment to receive technical assistance and instruction. One can see at a glance how this kind of attention to the writer and his/her document potentially changes the teacher's role from mere critic or evaluator to what Graves calls an "advocate." One can also see how it transforms the student's role from performer for a grade to author.

Research on the writing process, the learning environment, and the teacher's role encourages one to view the learner in new ways. The learner appears

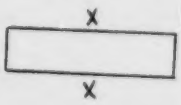
THE LANGUAGE OF CONFERENCE SETTINGS.

A. ROLE OF ADVOCATE



Sits near and next to child.
As close to equal height as possible.
Engages child visually.
Child holds piece, may offer.

B. ROLE OF ADVERSARY



Sits opposite.
Does not want to be next to or near child.
Chair higher.
Ignores eye contact.
Takes child's writing.

Figure 1. Two ways of interacting with students about their written work.

(from Graves, 1983)

not as an empty vessel to be filled with the formalized rules of English grammar but as a communicator engaged in the acquisition of new knowledge structures from the meaningful interactions s/he has with people and objects. In looking to the future of writing instruction, there is potential for altering schooling in ways that may dramatically transform the child's experience with writing.

What's Ahead for Writing Instruction?

It would be naive of us to conclude this paper without giving some attention to an issue that has captured the imagination of researchers, educators, parents, and children. That issue is the role that computers will play in literacy education in the coming years. Our intention is not to give prescriptive solutions, but to spark self-examination. We hope that this brief review will encourage readers to think about whether and how to incorporate computers into the teaching and learning of writing in school.

Such reflection will necessarily call upon educators to examine and, perhaps make more explicit, their curriculum for writing and their current classroom organization and teaching strategies. As the sociologist Lyman states, "a computer is both a machine and a social relation" (1983, p. 3). In this final section we will address issues related to both the technology of educational computers and the social organization of computers in schools.

Computer technology offers a new set of tools to writers and, potentially, new ways of looking at the writing process. Consider, for example, educator and technologist Papert's vision (1980):

> Consider an activity which may not occur to most people when they think of computers and children: the use of a computer as a writing instrument. For me, writing means making a rough draft and refining it over a considerable period of time. My image of myself as a writer includes the expectation of an "unacceptable" first draft that will develop with successive editing into presentable form. But I would not be able to afford this image if I were a third grader.

> The physical act of writing would be slow and laborious. I would have no secretary. For most children rewriting a text is so laborious that the first draft is the final copy, and the skill of rereading with a critical eye is never acquired. This changes dramatically when children have access to computers capable of manipulating text. The first draft is composed at the keyboard. Corrections are made easily. The current copy is always neat and tidy. I have seen a child move from total rejection of writing to an intense involvement (accompanied by rapid improvement of quality) within a few weeks of beginning to write with a computer. Even more dramatic changes are seen when the child has physical handicaps that make writing by hand more than usually difficult or even impossible. (p. 30)

To some this vision may seem exciting and promising. Others are skeptical about the computer's place among other realities of schooling that conspire to make Papert's child at the terminal seem unrealistic indeed. Some educators welcome this technology with open arms, arguing the importance of computer literacy for survival in today's society. Other educators are leery of it, perhaps fearful of buying into another short-lived trend such as educational television or new math.

It remains to be seen whether computers will prove to be an educational fad, an educational wonder or, more likely, something in between. At each end of the continuum, people have voiced strong opinions. Computer scientist, Brown, whose interest is in opening up new areas of person-machine communications, predicts that "by 1990, what's available in the computer marketplace will be constrained not by technology but by what people are capable of understanding" (cited in Gollman, 1984, p.3). Freedman, a professor of English, is more concerned that researchers are failing to address the central questions with respect to writing instruction. He writes that

> in the panic to find a panacea (and in the not-so-incidental urgency to corner funds) few pursue such essential questions as what makes good writing in the first place, how it has been attained, where it has existed, or who can teach it, and how (1984, p. 80).

Among those attempting to bridge the gap between an understanding of the capabilities of the technology and an understanding of writing and its in-

struction is a group of researchers at Harvard (Cazden, Michaels, & Watson-Gegeo, 1983). Their three-year study, begun in the fall of 1983, describes the introduction and use of microcomputers to teach writing in the classroom. A project of this duration allows the researchers to take a long-term look at the relationship between microcomputers and students' literacy. The focus of the first year has been to describe the activities and interactions of the students and teacher in two classrooms before and after the introduction of one computer in each room and a program for writing called "QUILL." (This program will be described briefly later in this section.) Now in their second year of study, the researchers are working with the same teachers and new students, focusing on the written texts produced with and without the use of interactive software and on the adjustments that teachers and students are making in their everyday school lives to accomodate and even exploit the presence of the new technology in their midst. In Year 3, using insights from the first two years for the refinement of the software, the researchers hope to introduce microcomputers into new classrooms and use their research on teaching with computers to help other educators incorporate computers into their programs for writing instruction.

Cazden, Michaels, and Watson-Gegeo, like many other researchers examining the link between microcomputers and literacy, will be able to offer educators rich case studies of teachers and children using computers for writing. Case studies are already being used in preservice teacher education programs as vehicles to help student think more critically about their experiences in the field (Florio & Clark, 1983). Case studies of classrooms with computers can offer teachers an opportunity to examine real-life teaching situations repeatedly and critically and anticipate problems and questions before computers actually are introduced into their classrooms.

How Are Computers Used in Educational Settings?

Though it is beyond the scope of this paper to describe the wide range of uses to which computers are being put in educational settings, in reviewing the research on computers and writing, one is struck by the scope and innovativeness of many computer projects. Among the case studies reviewed in preparation for this paper were descriptions of a system for teaching children to write before they read (Writing To Read, developed by Martin, reported in Asbell, 1984), talking computers that have given access to the world of language to children without language (Programs for Early Acquisition of Language, by Meyers, reported in Trachtman, 1984), a program that offers students the opportunity to participate in a pen-pal network that spans the nation (The Computer Chronicles Newswire, by Levin and Scollon, reported in Riel, 1983), and a community computer site that gives opportunities for computer use to families in a low income barrio (The Computer House, Adams, 1983).

Researchers and educators have developed various categorization systems for the use of computers in education (e.g., Collins, 1982; Cazden et al., 1983). One such categorization (Riel, 1983) draws on Kohlberg and Mayer's (1972) taxonomy of traditions in the development of Western educational thought to describe current uses of educational software. Kohlberg and Mayer identified three traditions--the ideologies of cultural transmission, romanticism, and progressivism--which make somewhat different assumptions regarding the objectives of the educational process.

In the cultural transmission model, the task confronting education is to impart the existing knowledge and moral rules of society to each new generation. The material to be learned and the sequence in which it is learned are [illegible]d by the teacher and the materials. Riel suggests that software known as [illegible]ter assisted instruction", the bulk of all educational software, re-

flects this philosophy of education. While detailed help and direction are provided by these programs, there is a danger that students will learn a particular task as a series of small steps without ever making sense of the whole activity. With respect to writing instruction, the authors of these programs assume that writing can be best learned by isolated drill and practice of various facets of the process.

An example of a program that seems to reflect this cultural transmission philosophy comes from the Southwest Regional Laboratory for Educational Research and Development (Shostak, 1982). This program emphasizes four specific aspects of composing: sentence combining, generating content for a particular discourse type, organizing content, and revising. This work is consistent with the cognitive developmental view of writing described earlier in this paper. Already tied to computers by the metaphorical relationship between artificial and human intelligence, this view of the writing process and its development seems well suited to the constraints of computer systems.

According to Riel, proponents of the second tradition, the romantic, believe that the school environment should allow each individual's good qualities to unfold. The student is placed in a rich learning environment in which little guidance is given with respect to what to learn or how to proceed. Riel proposes that discovery or learning-tool software reflect this philosophy. While this approach exposes the learner to the whole of the activity, the lack of direction may at times be overwhelming to the beginner. LOGO, invented by Papert (1980), is an example of a discovery-oriented program in which children develop their own programming language.

It is curious that Riel discusses only the cultural transmission and romantic traditions in her categorization of educational software. To extend her analogy, interactive computer programs seem to reflect the tradition of

interactive system in which students and computers engage in a prewriting interview. Burns (1982) writes:

> I have designed, developed, and programmed three computer programs to encourage thinking, programs I call "artificial intuition." These programs ask writers questions based on particular systems of inquiry, specific heuristics--though at some point I hope students will say to themselves, "Wait a minute, I can ask myself such questions.". . . The strength of these programs is that they imitate a way to investigate a topic, not *the* way by any stretch of the imagination, just one way" (p. 22).

Before choosing a computer program (or before deciding how best to use a pre-selected program) it is important for educators to examine the assumptions underlying the program in relation to their own views about the teaching of writing. This examination may be difficult on two counts. First, it is not always intuitively obvious what assumptions underlie a particular educational software program for teaching writing. Second, one's own underlying assumptions about writing and how to teach need also to be subjects for examination and critical reflection if the computer is to make sense in the classroom learning environment.

The critical role that teachers play in shaping the impact of computers on children's literacy has been highlighted by Rubin (1983), a co-investigator of a research project examining the effects of the QUILL program on students' writing (Bruce & Rubin, 1983). QUILL is a software package that offers teachers and children a text-editor (Writer's Assistant), an information storage and retrieval system (Library), an electronic mail system (Mailbag), a program to help students plan and organize their thoughts (Planner), and a program that allows children to create stories with alternate branches and endings (Story Maker). Though the project has invested considerable time, energy, and money in the testing and refining of this software, Rubin contends that the teacher's view of the educational importance of computers has much more influence than the features of the software itself. Thus, an important facet of

money in the testing and refining of this software, Rubin contends that the teacher's view of the educational importance of computers has much more influence than the features of the software itself. Thus, an important facet of the project's work is the development and implementation of a teacher training plan for the use of QUILL software in elementary schools. As computer scient ist Moran contends: "It's not enough for the system to provide a powerful functional capability if the user cannot make use of it" (cited in Gollman, 1984, p. 22).

Many of the teachers with whom Bruce and Rubin worked expressed their initial and recurring concerns about managing the use of the computer effectively. These concerns are not surprising, given the newness of computers to teachers and students alike. However, Rubin (1983) has also noted that the interaction of classroom management issues with software features has a greater effect on a program's use than the computer or the software itself. In reporting their work in progress, Bruce and Rubin (1983) offer case studies of the six sites in which they are field testing the QUILL program. Their standard format for the sharing of each of the six descriptions includes a section on "Classroom Management of QUILL." It seems that some teachers were able fit QUILL into their normal teaching routine while others had to reorganize their writing instruction around the computer.

The issue of classroom organization is strongly tied to the controversial problem of the equity of computer use by students. That there is tremendous diversity among schools and even among classrooms within the same school with respect to the use of computers is not a new finding (Miller, 1983). Cohen (1983) has found that this diversity manifests itself along several dimensions: the hardware and software available in schools (in both quantity and quality), the accessibility of computers, the activities and content consider-

ed appropriate, the arrangement of computers in the classroom, the structure of the lessons, curriculum to be covered, and the attitudes of the teachers toward the use of microcomputers.

The Computer Use Study Group (CUSG) (1983) of San Diego notes that while researchers know something about the number of computers in U.S. schools, they know less about the distribution and use of computers in the schools. The CUSG group is interested in "trying to determine whether computers will be tools which facilitate equality among different social groups or whether they will be tools which further stratify groups within society" (CUSG, 1983, p.51). Looking at 21 schools in five districts in California, the group found a very strong relationship between (1) the source of funding for computer acquisition, (2) the type of students who are educated using computers, (3) the type of instruction students are exposed to, and (4) the rationale for computer use in the districts studied.

In the CUSG research, financial support seemed most often to come from sources outside the educational system, as did impetus for the acquisition of computers in the schools studied. The CUSG (1983) found that

> money available for the education of "gifted and talented" young sters, "economically and culturally disadvantaged" students, school improvement programs and the desegregation effort purchased 93% of the computers in these districts. (p.52)

The CUSG also found a relationship between the source of funds used for computer acquisition and the students who have access to those computers. Differential access to computers and computer use was reflected in the kinds of instruction students received. Lower class and ethnic minority students received instruction in basic skills--computer-aided drill and practice in which control of the learning is maintained by the computer. White middle-class and ethnic-majority students were more likely to receive instruction in

computer literacy programming and problem solving that encourages learner initiation. As the CUSG (1983) concluded:

> The tracking of students from different socioeconomic backgrounds through different computer based curricula stratifies students' access to information technology. Differential access represents one of the ways in which the microcomputer can be used as a tool to contribute further to stratification of our society. (p. 54)

Neither we nor the CUSG wish to imply that the introduction of microcomputers into a classroom necessarily results in stratification of students. In fact, Bruce and Rubin (1983) highlight in their case studies of the use of QUILL several ways in which teachers took precautions against differential access to computers in their classrooms (e.g., setting up schedules for computer time, keeping track of the actual amount of time each student spends with the computer).

Also, the motivational qualities of computers were frequently described in the research (Bruce & Rubin), 1983). Whether due to the novelty of the technology, the privacy of the learning experience, the immediacy of feedback, or any number of other factors, there are success stories of lower socioeconomic and ethnic minority children whose interest in school increased with introduction of microcomputers in their classrooms. Finally, in many classrooms the students work with partners or in teams. Most of the case studies of these classrooms reported that the students enjoyed working with partners. Bruce and Rubin (1983) include student quotes such as: "It's fun to share ideas with other people," "You get more help from partners," and "The story can be filled with two people's ideas this way" (p. 17). Not every student appreciates this partnership, however, as was reflected in one child's comment that "Partners hog the computer." (p. 10).

How Do Educators Participate in This Innovation?

In a handbook for using computers in the classroom, researchers Mehan and

Souviney (1984) argue that computers are an educational innovation unlike many of the unsuccessful innovations of the past. Many educational innovations have been imposed from outside the schools or from the top of the hierarchy downward. Often these innovation have been dropped soon after external funding has been withdrawn. Rarely have these innovations made much difference in the organization of education within a school. In contrast, Mehan and Souviney argue that the use of microcomputers to help teach writing in school is far more of a grass-roots movement, with support from teachers, parents, and the business community. From this observation they assert that

> innovative teachers, motivated parents and business interests constitute a coalition for change that is unique in educational history. It is important to note that this coalition operates closer to the bottom of the school hierarchy than the top. Knowledgeable and innovative teachers have approached neighborhood computer stores and have been successful in receiving free or inexpensive software as well as computer hardware for use in their own classrooms. Teachers have been the driving force behind the introduction and spread of computers within schools. (Mehan & Souviney, 1984, pp. 15-16).

The research needed to assess both this statement and the roles played by educators in the use of technology in school is in its infancy. Still, from what currently exists, several observations can be made. First, learning how to use the computer is a necessary but not sufficient condition for successful use of computers in teaching writing or any other part of the curriculum. Software must be considered. Like other published, packaged curricular materials, programs for teaching writing with computers carry with them implicit and explicit assumptions about the nature of the writing process, the role of teacher and student, and the organization of the classroom. Second, integrating the new technology into existing curricula and instructional arrangements requires educators to reexamine their own beliefs, values, assumptions, and techniques. Thus the computer functions not only as an instructional inter-

vention, but as an intervention into the plans and actions of educators.

Educators hold a very special place in this grass-roots movement to introduce new technologies into the classroom. They are responsible for the curriculum and for the face-to-face learning experiences of their students. Knowledge about the technology, though important, merely scratches the surface of the knowledge required to use that technology effectively. The rest of the knowledge required does not come from outsiders expert in the workings of the computer. It comes from educators who are already thoughtful and knowledgeable about their students and about the things they hope their students will learn.

Conclusion

Thi paper was organized around some perennial concerns of educators about writing instruction. We have reviewed a number of studies and attempted to inform and stimulate the reader's thinking about his/her own situation. Some of the themes in this paper have been recurring ones. For example, writing has lately been viewed as a social and intellectual process, and this view of writing has implications for how educators interpret research and put it to use. In addition, only recently has the teaching of writing been a focus of research, and this research has raised many new questions about the role of the teacher in the instructional process.

Similarly, recent research on the environments in which writing is taught has underscored writing's sensitivity to social context. Teachers operate within classrooms, where they have considerable leeway to structure learning situations. However, they also operate within the larger institution of the school and the community. The norms, policies, and procedures of the school at large can have a powerful impact on the way writing is taught within the four walls of the classroom. Additionally, societal norms and values about

literacy help to shape school writing. The diversity and inequality present in the wider society can enter the classroom. In the face of these realities, there are many things educators can do to support and enhance all students' growth as writers, and we have attempted to report some of the research that speaks to those things.

Finally, we have only scratched the surface of the important contemporary issue of the computers' place in classroom writing instruction. Far from leaving the educator behind in the scurry toward new and technically complicated ways of teaching, research has already begun to show that this movement requires the educator's guidance if it is to be an effective, equitable, and longlasting one.

We have neither raised all the important questions nor fully answered even the few questions raised. However, we have attempted to stimulate conversation, self-examination, inquiry, and criticism among educators concerned with the important and perennial challenge of helping students learn to write.

Additional Reading

Suggestions for additional reading are grouped under five headings: teaching writing, theory and research in writing, writing and computers, the writing curriculum, the special needs of students, and special issues of journals dealing with topics in writing instruction and research.

Teaching Writing

Moffett, J. (1983). Teaching the universe of discourse. Boston, MA: Houghton Mifflin.

This re-issue of Moffett's well-known 1968 book considers curriculum and instruction in writing both developmentally and as writing is related to oral language. Moffett offers a way of approaching writing not as an isolated content area, but as an expressive process that is taught and learned best as it is used. Ideas for teaching writing in the content areas arise as Moffett takes the reader through the various types of written discourse that are learned by a developing writer.

Graves, D. (1983). Writing: Teachers and children at work. Exeter, NH: Heinemann Educational Books.

This book is addressed to teachers who want to improve their teaching of writing. Drawing heavily on his own descriptive research and linking growth in writing to the oral exchanges teachers have with their students, Graves gests that the book be read as a "collection of workshops" offering practical guidance and research and theory in such areas as the teacher's role, classroom organization and practices, reporting and record-keeping, and child growth in writing.

Elbow, P. (1973). Writing without teachers. London: Oxford University Press.

As the title suggests, this book takes a critical view of typical methods of teaching writing. Elbow offers his own unique program for learning to write--alone or in a group. A key element of this program is free writing. This activity, intended to get writers beyond blocks, places the production of text first. Writers write their thoughts down on paper without stopping to edit or organize. Only later do they return to their writing to edit and revise. In this practical and imaginative book, Elbow considers not only thinking processes underlying writing, but the social conditions that seem likely to facilitate or impede the flow of ideas on paper.

Flower, L. (1981). Problem-solving strategies for writing. San Diego, CA: Harcourt, Brace, Jovanovich.

Drawing on her extensive analysis of the self-reports of writers about their thinking during composing, Flower has applied her cognitive model of the writing process to the practical problem of teaching young adults to do what she calls "real world writing." Accompanied by a useful teacher's guide, the book breaks the composing process into a series of steps. For each step, strategies, tactics, and exercises are offered. Flower makes use of examples from her extensive data collection of writing samples and authors' comments on their writing.

Shaughnessy, M. P. (1977). Errors and expectations. New York: Oxford University Press.

The author carefully documents the writing of her adult BW (basic writing) students in the City University of New York. She attempts to discover how her students learn from making mistakes and how she can learn about beginning writers themselves through analysis of their errors. In so doing, her book offers both a window on the writing process that is of considerable re-search interest in its own right and ways for teachers of beginning new and constructive writers to think about errors. Rules, their application, misapplication, and instruction are treated in the book as are contextual issues such as the writing situations available in school and the beginning writer's self-concept.

Theory and Research on Writing

Kean, J. M. (1983). The teaching of writing in our schools (Fastback #193). Bloomington, IN: Phi Delta Kappa Educational Foundation.

Kean offers the busy educator a lively, succinct synthesis of current research on the writing process. He touches briefly on important issues including the process approach to writing, the environment for writing, assessment of both student writers and writing programs, special learners and their writing needs, and the integration of writing into the rest of the curriculum. A useful bibliography of related readings is included in this handy booklet.

Glatthorn, A. A. (1981). Writing in the schools: Improvement through effective leadership. Reston, VA: National Association of Secondary School Principals.

Like Kean's booklet, this publication is intended for the busy professional eager to get an overview of the current status of writing research and instruction. Glatthorn's primary audience is administrators. With clear and useful tables and charts and succinct text, the author reviews research on the composing process and moves quickly to such practical problems as evaluation of a school's writing program, staff development in writing, curricular improvement, administrative supervision of writing instruction, assessment, and parental involvement. The book includes inventories and checklists that can be used by educators to initiate inquiry and discussion in their own

classrooms, schools, and communities.

Parker, R. P., & Davis F. A. (Eds.). (1983). Developing literacy: Young children's use of language. Newark, DE: The International Reading Association.

Many of the leading researchers and scholars in the areas of oral language and literacy have contributed to this informative and stimulating book. While its theme is broader than writing instruction, the collection tackles difficult theoretical and practical issues such as the models of language acquisition people hold and their relation to decisions people make about formal education, the curriculum for literacy in school and its relation to learning, schools as literate environments, and language as a cognitive, cultural, and political phenomenon. Chapter authors make many efforts to link theory and research to the problems and realities of educational settings.

Newkirk, T., & Atwell N. (Eds.). (1982). Understanding writing: Ways of observing, learning, and teaching (K-8). Chelmsford, MA: The Northeast Regional Exchange, Inc.

Virtually all of the chapters in this book are examples of writing research conducted by teachers in their own classrooms and on problems they found important. This book is a potpourri of studies of topics that are of practical concern to elementary school teachers and researchers alike. However, as the editors point out, "the articles do more than merely recount teaching procedures. . . .the authors are acting as observers, learners, and teachers." This book can be read both for information about the writing instruction process and as an example of a growing trend for teachers (with or without the collaboration of university-based researchers) to frame research questions, collect and analyze data, and report their findings to colleagues. A well-organized selected bibliography on writing and teaching concludes this book.

Writing and Computers

Lawlor, J. (Ed). (1982). Computers in composition and instruction. Los Alamitos, CA: SWRL Educational Research and Development.

This book reports the proceedings of a conference sponsored by the Southwest Regional Laboratory for Educational Research and Development to consider developments in computer-based learning and their potential applications to teaching composition. This book can be read as an early statement of the state of the art, with chapters dealing with hardware, software, and their selection to chapters laying out theories of the composing process and the ways in which computer programs may enhance and extend the teaching and learning of that process. Since books are being published on these topics rapidly and in large number, this book may be read both for its historical value and as a source for references to other work in the field.

Mehan, H., & Souviney R. (Eds.). (1984). The write help: A handbook for computers in classrooms. La Jolla, CA: Center for Human Information Processing, University of California, San Diego.

This handbook was produced by researchers and teachers. It reviews the current state of computer use in the California school districts where the authors have worked. In addition, it offers ways to think about how microcomputers can be used to achieve unique educational goals. In a final very practical section, ideas on the introduction and use of the computer and the integration of the computer into the classroom social system are offered by a group of teachers and collaborating researchers. An appendix of materials that can be adapted by other teachers for use in their own classrooms is included.

The Writing Curriculum

Hillocks, G. Jr. (Ed.) (1982). The English curriculum under fire: What are the real basics? Urbana, IL: National Council of Teachers of English.

This timely collection of essays examines the current crisis in American writing instruction. Not only is the nature of the attack on English education taken as a problem for inquiry in this book, but the concept of the "basics" to which English teachers have been urged to return is as well. The essays in this book enrich understanding of the composing process and why it is difficult to teach. They call into question tacit curricular assumptions about what writing is and how and why it should be taught. The book encourages reflection and re-examination of the writing curriculum in American schools.

The Special Needs of Students

Cronnell, B. (Ed). (1981). The writing needs of linguistically different students. Los Alamitos, CA: SWRL Educational Research and Development.

The proceedings of a conference sponsored by the Southwest Regional Laboratory for Educational Research and Development, this book offers a collection of papers on the writing needs of children who come from a variety of racial, ethnic, language, and geographic backgrounds and who do not speak standard English. As editor Cronnell points out, "although most educators probably agree that such students have special needs, very little research has has been done to identify these needs and to establish appropriate instructional strategies that can meet these needs." For these reasons, this book is a good starting point for basic information about cultural difference, its importance in the classroom, and the relation of classroom and culture to the process of learning to write.

Whiteman, M. F. (1981). Writing: The nature, development, and teaching of written communication (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum Associates.

This is a hardcover book that may not be readily available in school or

community libraries. However, it is included here because its final section, "Language Differences and Writing," is another of the few collections of writing available to educators on the needs of students who are culturally or linguistically different. In addition, this section includes a chapter devoted to the written English of hearing-impaired adolescents. Taken together, these chapters stimulate the reader to think not only of the difficulties faced by beginning writers who do not speak standard English, but they encourage reflection upon expectations for these students and the opportunities that schools and classrooms provide for them to communicate in the written mode.

Special Issues of Professional Journals

In the past few years, several journals read by educators and researchers alike have published special issues on various aspects of the writing process and its instruction. We do not summarize the contents of those special issues here, but simply cite them for readers who wish to explore their contents.

Theory Into Practice (1980, Summer). 19(3). ("Learning to write: An Expression of Language").

Educational Psychologist. (1982, fall). 17(3). ("Special issue: The psychology of writing").

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